

Patent Application of Joseph L. DiCarlo for “Archers Flame Illuminated Arrow
Nock” continued

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ABSTRACT

An archery arrow including conventional components such as a tubular shaft, a pointed head attached to the forward end of the shaft, fletching on the rearward portion of the shaft and a nock at the rear end of the shaft. The arrow structure also includes an illuminated nock of the present invention and includes a battery/switch/collar/L.E.D-combined unit, which is held in place by a single anchor pin with the L.E.D. portion of the battery inside a conventional translucent or clear nock. The arrow shaft also uses a wooden dowel or other like material to create a backstop and cushion within the arrow shaft. This may also be permanently constructed as part of the arrow shaft during manufacturing. This helps disperse the load generated from the strings forward motion when released from the bow in a full drawn position between the end cap and the entire battery and switch assembly. Upon shooting the arrow from a longbow, compound, or crossbow, the switch contacts are forced into the “closed switch” position by the forward force generated along the axis of the arrow shaft. Therefore, energizing the L.E.D. light source to give off light through the translucent or clear nock. Once shot and activated it's a simple matter of removing the nock from the shaft pulling rearward on the battery while holding the nock in a stationary position to turn the LED off. With this configuration of components said lighted nock can be dislodged from the arrow shaft and still remain in the lighted position. This invention is also reusable by turning said nock off and reinserting the nock back into the arrow shaft and shooting again. I have also made and tested a working prototype.